

A JOINT LOGISTICS COMMAND--IS IT NEEDED?

A MONOGRAPH

BY

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ABSTRACT

A JOINT THEATER LOGISTICS COMMAND - IS IT NEEDED? By LTC Robert Chadwick, USA, 43 pages.

Joint Publication 4.0, Doctrine for Support of Joint Operations states the art of logistics requires the integration of sustainment efforts to support the employment concept of a geographic combatant commander. Each service supports its forces assigned to a combatant commander unless otherwise directed or by existing agreements between the services. Effective integration of logistics is required to effectively support the plan, to prioritize resources, and to prevent duplication of effort among the services.

Historically logistical support to joint operations has been problematic. Theater support organizations were largely ad hoc organizations and priorities for scarce resources were matters of contention between the services. Competing logistics systems of the services were often redundant and costly.

The joint staff proposed establishment of a Joint Theater Logistics Command and Control organization to prioritize scarce resources, to capitalize on the capabilities of each service, and to eliminate duplication of effort by the services. Similar to a Theater Army Area Command, the organization would have tasking authority over the logistics forces of the services. The primary purpose of this organization would be common logistics support to all of the services.

The Army Theater Support Command (TSC) serves as the Army Service Component Commander's single point of contact to sustain Army forces. The TSC is also designed to provide common logistics support to the other services. Under most circumstances the Army will be either the most capable service or the dominant user of logistical supplies and services. The geographic combatant commander has the authority to designate a service as lead agent for common logistics support.

An historical review indicates that although joint logistical operations have not been very efficient, they have been very effective. Secondly, a review of current joint doctrine concludes that joint commanders have adequate flexibility to integrate the logistical efforts of the services to ensure efficiency and effectiveness. Finally, an analysis was conducted to determine advantages/disadvantages of a Joint Logistics Command. The monograph concludes that a Joint Logistics Command is not needed and that the Army Theater Support Command is normally the best method of providing common logistics support.

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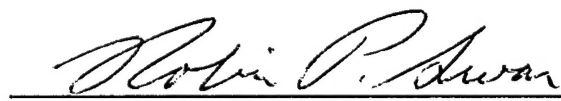
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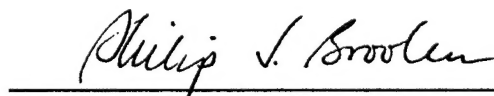
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INTRODUCTION

"The navy under Porter was all it could be... Without its assistance the campaign could not have been successfully made with twice the number of men..."

General U.S. Grant¹

Background

As the quote above suggests, joint operations are not a new phenomenon. In 1863, Admiral Porter's Union gunboats escorted transport ships south on the Mississippi River past Confederate gun batteries at Vicksburg.² This joint operation allowed General Grant to establish a base of supply south of Vicksburg and facilitated his now famous victory in the Vicksburg Campaign. In 1898, the Navy supported the debarkation of Army troops in Cuba during the Spanish American War.³ During World War II, Admiral Nimitz established the first truly joint staff with a logistics division to coordinate the planning and execution of joint Army, Navy and Marine Corps operations.⁴ Despite these successes in joint operations, there was still substantial room for improvement- particularly in the area of logistics.

After World War II many believed future wars would require integrated ground, air, and sea forces operating under a joint command structure.⁵ This belief led Congress to pass the National Security Act of 1947. Two major features of the act were the establishment of the Joint Chiefs of Staff and the unified commands. A unified command has forces from two or more services under a single commander in chief (CINC) responsible for a broad and continuing mission. Atlantic Command, European

Command, Southern Command, Central Command, and Pacific Command are all the result of this legislation.

Besides the unified command structure, an operational chain of command was established from the Secretary of Defense through the Joint Chiefs of Staff to the unified commands. The three military departments were removed from the operational chain of command but the departments were still required to train, supply, and administer their respective forces. The 1986 Goldwater-Nichols Act further refined the operational chain of command from the President through the Secretary of Defense to each unified command.

The establishment of an operational and administrative chain of command created some significant challenges for joint logistics. Unified commanders or subordinate unified commanders were granted significant authority to integrate the logistical efforts of the service forces assigned to their commands. This authority only applies to a unified commander or a subordinate unified commander. A Joint Task Force Commander does not have this authority because a Joint Task Force is only formed for very specific operational requirements and centralized control of logistics is not essential.⁶ Unified and subordinate unified commanders are required to effectively support operations, to prioritize resources, and to prevent duplication of effort among the services.⁷ At the same time each military department remains responsible to support its forces assigned to a joint command unless otherwise directed or by existing agreements between the services.

Statutory logistical responsibilities of the Army, Navy, Air Force, and Marine Corps required development of logistical forces and doctrine peculiar to each service.

Although a CINC can organize these logistical forces to meet his needs, these forces were primarily designed to meet the needs of each service, not the needs of a joint force commander. It should also be noted that the joint operational planning system does not include logistics forces. A CINC is apportioned major combat forces and provided planning guidance to prepare for likely contingencies.⁸ It is the responsibility of the Chairman of the Joint Chiefs of Staff to assess the logistical feasibility of these plans and to work with the military departments to address identified logistical shortfalls or problems.⁹ Thus the duality of logistics and operations is prevalent not only at operational level of war but at the strategic level as well.

As the new millenium approaches, military operations will be increasingly joint and will require even more effective integration of the services. The future of joint logistics is best described by Joint Vision 2010, Focused Logistics. It provides the Joint Chiefs of Staff vision for future logistics doctrine and capabilities.¹⁰ If the past provides an understanding of the present, then Joint Vision 2010 provides a glimpse into the future.

Joint Vision 2010 Focused Logistics proposes the establishment of a Joint Logistics Command and Control activity to provide the CINC a single entity responsible for joint logistics operations. The primary focus of this activity is the management of common logistics support. Joint Vision 2010 also intended that this C2 activity would not have assigned logistics units from the services, but that it would have authority to direct the logistics activities of each of the services to meet operational requirements. Currently, the CINC logistics staff (J4) provides the CINC a single entity responsible for

joint logistics operations.

Another option to ensure effective and efficient joint logistics operations in the future is the creation of a Joint Logistics Command within each unified command. A true Joint Logistics Command would be composed of logistical elements of each of the services and would provide the CINC a single command responsible for joint logistics operations. A Joint Logistics Command would provide common logistics support while the services continue to provide their own service particular logistics requirements.

Research Question

Is a Joint Logistics Command needed to provide a unified commander the means to conduct effective and efficient joint logistics operations? This is the central question of this monograph. To develop an understanding of the problem and to formulate an answer to this question, the monograph will address the following three subordinate research questions.

1. What is the historical background of joint logistics?
2. What are the current logistical organizations and doctrine of the services?
3. How does current joint logistical doctrine integrate each of the services?

Section II of the monograph will answer the first question by providing a historical perspective of selected joint logistics operations from World War II to Somalia. Sections III and IV will review current joint logistical doctrine and the logistical organizations of the services to answer questions 2 and 3. Section V will provide an analysis to determine if a Joint Logistics Command is needed. The criteria for analysis will be the organizational model of DOTMLP (doctrine, organization, training, materiel,

leaders and people). Finally, Section VI will provide a summary of the research and answer the basic research question.

HISTORICAL PERSPECTIVE

"There is no such thing as a separate land, sea or air war."

General Dwight David Eisenhower¹¹

Introduction

The evolution of joint logistics from World War II to the present provides an historical understanding of the inherent problems of conducting joint logistical operations. World War II was a watershed event for joint operations. Prior to the war, the military services were relatively small independent entities. World War II transformed these independent entities into large operational forces consisting of ground, air, and sea components conducting joint operations around the globe.¹²

The seeds for unification of the armed forces and the subsequent National Security Act of 1947 were sown in 1941. The Arcadia Conference established the Joint Chiefs of Staff (JCS) to coordinate strategic planning and operations. A unified command structure for each theater of operations was also established. Essentially, the service with the most significant responsibilities in a given theater of operations was designated as the executive agent or commander of the theater. Each service provided component commands subordinate to the unified command. This command structure only applied to operational issues and each service guarded its administrative linkage to its field forces with vigilance.¹³ Maintaining these two lines of authority (operational and administrative) has been the primary factor that has shaped joint logistical operations for the past fifty years.

World War II in the Pacific Theater

There is an expression that geography is destiny. In the Pacific Theater of World War II this was clearly the case. The Pacific Ocean occupies approximately one-third of the earth's surface. At the equator it is 10,000 miles wide and it is over 9,000 miles wide from the Bering Strait in the north to the Antarctic Circle in the south. To cope with the vastness of the Pacific Theater, the Joint Chiefs of Staff divided the area into two major commands. Admiral Nimitz commanded the Pacific Ocean Area. The Pacific Ocean area was further subdivided into the North, Central and South Pacific Ocean Areas. General Mac Arthur commanded the Southwestern Pacific Area. Both men reported directly to the Joint Chiefs of Staff.

The theater conditions in the Pacific were significantly different than in the Europe. The Pacific was a maritime theater and Europe was a continental theater. Unlike Europe, rail and road networks were practically nonexistent in the Pacific. There were also a limited number of ports and most were of limited capacity. Small islands restricted the establishment of large logistical bases. Inter-theater and Intra-theater sea lines of communication provided the basis for distribution of personnel, supplies, and equipment. Time and distance created immense challenges as major operations thousands of miles apart were conducted simultaneously.¹⁴ In this maritime theater, the ship, rather than the truck, was the king of the theater distribution system. Port facilities, local lines of communication, and infrastructure in Mac Arthur's Southwest Pacific Area were not as austere as those faced by Admiral Nimitz.

After Pearl Harbor, there was a severe shortage of shipping assets to support

operations in the Pacific. The Army Transport Service controlled more ships than the Navy. Military forces were operating at the end of a 6,000-mile logistics pipeline that was empty because of the shipping shortfall.¹⁵ Since the ship was the primary means of distribution in the Pacific Theater, the consequences of limited shipping were immense. A Joint Army Navy War Shipping Administration Ship Operations Committee was established in early 1943 to coordinate West Coast shipping for the Pacific. Theater commanders submitted proposed priority lists to move troops from the United States to the theater. A joint committee in San Francisco would then consolidate the lists from the services into a single priority list. The success of integrating and prioritizing the shipment of personnel was never implemented to prioritize cargo movement.¹⁶

From the very beginning of the war there was a clear recognition that close cooperation was needed between the Army and the Navy regarding logistics. In 1942 both the Army and the Navy agreed to the need for a joint Army-Navy logistics staff in the Pacific. Admiral Nimitz, the Commander and Chief of Pacific Ocean Areas, requested approval from the Navy Department to have a joint Army-Navy staff with an Army officer in charge of logistics.¹⁷ General Mac Arthur, unlike Admiral Nimitz, never formed a true joint staff.¹⁸

By 1943 US forces in the Pacific transitioned from defensive to offensive operations. A combination of factors made this transition easier from a logistical point of view. First of all, Admiral Nimitz established a Joint Staff in September 1943. The logistics section of his Joint Staff was responsible for establishing priorities, theater transportation, fuel supply, medical services, and advance base section operations.

Secondly, landing craft and ships to support amphibious operations became much more abundant and Naval Seabees became more adept at rapidly improving airfields and seaports. Finally, Naval techniques for replenishment at sea reduced the dependence of the Navy on land based resupply.¹⁹

There were other successes in joint logistical operations as well. For example, in the South Pacific Area, the Army supported shore-based forces while the Navy supplied gasoline and oil for all forces.²⁰ The series of amphibious operations across the Pacific also caused close Army, Navy, and Marine Corps cooperation. Joint committees, such as the Joint Army Navy War Shipping Administration Ship Operations Committee allocated limited shipping. Despite these examples, logistics integration was never fully achieved and wasteful duplication of effort continued throughout the war²¹.

The War in Vietnam

The War in Vietnam began approximately twenty-five years after the National Security Act of 1947 was passed. Pacific Command in Hawaii was the unified command responsible for the geographical area that contained Vietnam. The Army component of Pacific Command was the United States Army Pacific also located in Hawaii. In 1965 the United States began deploying major combat forces to Vietnam. By the end of the year 184,000 American military personnel had deployed to Vietnam.²² Eventually, logisticians would support a force of over a half a million men and women at the end of a 9,000 to 10,000 mile long line of communication.²³

On 1 April 1965, United States Army Pacific activated the 1st Logistical Support Command. There were two major problems associated with the birth of the 1st Logistics

Command. First, it was established too late and as a result the theater was not prepared for the massive influx of personnel, supplies, and equipment. Second, it was an ad hoc command staffed with anybody who was available. The personnel were not trained or equipped for their mission. Before the activation of the 1st Logistics Command, the Navy was responsible for providing logistical support to the Military Assistance and Advisory Groups in Vietnam. After the activation of the 1st Logistics Command the Army assumed responsibility for providing all logistics support in Vietnam less unique requirements of the Air Force and the Navy.²⁴

The 1st Logistical Command was divided into four geographic support commands in Da Nang, Qui Nhon, Cam Ranh Bay, and Saigon each supporting a combat corps.²⁵ In the vicinity of Da Nang, I Corps operated in close proximity with the Marine Corps and Navy. By the direction of the Commander of Pacific Command, the Navy was directed to run the port and support the marines and sailors. Consequently there was a large amount of duplication and layering of supplies in the area.²⁶ A House Government Operations report cited that, "Supply support to Vietnam was at once a demonstration of superb performance and appalling waste."²⁷

Common supply support was a difficult problem that lingered on unresolved because no one was anxious to push for common supply support to all services by one service or another.²⁸ Another problem involved the number of separate logistical systems operating in Vietnam. At one time, 23 different logistical pipelines came into Vietnam. In the Army alone, many deployed divisions maintained an informal line of communication back to their home stations in the United States. These competing

systems led to tremendous inefficiency and unnecessary costs.²⁹

Almost 25 years after the establishment of unified commands, joint logistical operations in Vietnam were generally inefficient and wasteful. Although the original plan tasked the Army to provide common support, CINC Pacific Command directed the Navy to support the Marines in Da Nang. The Army established an ad hoc logistics command to meet its responsibilities to support forces assigned to a CINC. The Army was not fully prepared to meet its own logistical needs much less those of a joint force. Redundant logistics systems operating in the theater led to inefficiency and waste.

The Persian Gulf War

Almost 50 years after World War II the United States went to war in the Persian Gulf after Iraq invaded the country of Kuwait. The armed services deployed to Saudi Arabia armed with over 50 years of legislative reforms to improve joint operations. The most recent reform was the Goldwater Nichols Act. One of its features was the statutory requirement to develop joint doctrine.

The Persian Gulf War provides the richest source of information regarding the potential challenges of joint theater logistics in recent times. The scope and the magnitude of the rapid deployment of Army, Air Force, Navy, and Marine Corps forces into the Persian Gulf dwarfs all other recent contingency operations. In fact, the pace of the deployment during the initial 30 days of the war exceeded the deployment rates of the early stages of World War II, Korea, and Vietnam. Rapid force expansion in the theater forced General Schwarzkopf and Lieutenant General Yeosock to quickly establish a single point of contact for the theater logistics effort. This led to the activation of the 22nd

Support Command and the appointment of Lieutenant General Gus Pagonis as its commander. While directly responsible to the CINC for theater wide logistics, the 22nd Support Command was a subordinate of the 3rd Army Commander, LTG Yeosock. All fuel, water, ammunition, and all other classes of supply (except repair parts) required by the Marines, Air Force and Army were the responsibility of General Pagonis.³⁰ As in Vietnam, an ad hoc command was established with available personnel to meet the challenge.

Although it was an ad hoc support command, the logistical accomplishments of the 22nd Support Command were extraordinary. Statistics of the war illustrate the magnitude of the effort. Over 122 million meals were planned, moved, and served. Supply units pumped over 1.3 billion gallons of fuel and theater truck drivers drove over 52 million miles. Over 500 short tons of mail per day were distributed to soldiers. Finally the ports received over 12,435 tracked vehicles and 117,157 wheeled vehicles.³¹ Unfortunately scant information is available on the joint logistics operations of the war. LTG Pagonis' account of the logistics operations in the Gulf War is provided in his book *Moving Mountains*. The book provides very limited discussion on the logistical needs of the other services. He does mention that the pre-positioned supply ships and host nation support (HNS) provided the Army, Marine Corps and the Air Force a substantial amount of logistical support— particularly at the beginning of the war. There is also no discussion of joint boards, centers, and committees that would normally be established to coordinate logistical issues between the services.

The United States Air Force deployed to various air bases in Saudi Arabia. The

Air Force deployed over 85 per cent of its tents, dining facilities, etc., to support bare base operations. Programs such as the Air Force Harvest Falcon provided the capability to provide comfortable life support for over 55,000 personnel. Host Nation Support also supplemented much of the Air Force's food requirements.³² Saudi Arabia, Oman, and the United Arab Emirates provided fuel to support theater operations. At the height of the war, the US Air Force was using 15 million gallons of fuel per day. Air Force munitions also placed tremendous demands on the theater logistics system. 350,000 tons of ammunition had been shipped primarily by sea to the theater and only 69,000 tons were actually expended by the end of the war. The Army was responsible for the moving ammunition from ports of debarkation to forward bases and locations. The 7th Transportation Group using seven truck battalions consisting of over 1300 military cargo trucks and 700 commercial trucks were the primary means to support the inland movement of ammunition.³³

The Navy operated from advanced bases in the United Arab Emirates and was of no major consequence to ground logistical operations in the theater. The Marine Corps deployed through the port of Al Jubail, which provided ample capacity, warehousing, and staging areas. Once again the pre-positioned ships provided approximately 30 days of supply for Marine forces in the theater. The Marine Corps also employed a Field Service Support Group to move supplies, personnel and equipment from ports to forward tactical areas and units. Army transportation units assisted Marine Corps units with movements from their initial staging areas to forward tactical assembly areas.

Just like the Pacific Theater in World War II, transportation of soldiers,

equipment, and supplies into the theater became a challenging problem. The requirements and rapidly changing priorities of each service quickly exceeded the capabilities of Military Airlift Command (MAC). MAC had to establish a daily allocation of short tons per day for each service. Commanders could not tell what units were moved or moving. The ripple effect of the problem was tremendous. Air and seaports could no longer predict departures and arrivals in an acceptable manner. More importantly, this inefficient flow of forces and equipment led to the inefficient use of very limited strategic lift resources.

The Persian Gulf War was an extraordinary accomplishment. Ironically, independent component logistical operations (rather than integrated joint logistics operations) may have created the conditions for this success. The 22nd SUPCOM relied heavily on host nation support and contracting to meet its common support requirements to the other services. Much of the logistical support obtained by the other services from the theater was by their own initiative and required little Army involvement.

Once again the Persian Gulf War illustrated some recurring problems of joint logistics. Just as in Vietnam, the Army established an ad hoc theater logistics command and control element. Although it performed magnificently, it was not staffed, trained, or organized to provide common support to all the services operating in the theater. As in Vietnam, each of the services operated their own service specific logistics automation systems. No single automation system existed to provide centralized control over supplies in the theater or moving into the theater. The unexpected availability of host nation resources and support facilitated logistics operations. Perhaps the most important

factor was the 5 months of time to build the theater logistics base before combat operations began. Despite the shortcomings, the logistical accomplishments of each of the services were extraordinary. Clearly there was room for improvement in the theater logistical system. At the same time, Desert Storm also indicates that a degree of redundancy in logistical operations is not only acceptable but also desirable. A more centralized theater logistics system may have been more efficient but not as effective at meeting the unique demands of each of the services.

Operation Restore Hope (Somalia)

The United Nations Operation in Somalia (UNOSOM) was established in April 1992 to provide a peacekeeping force to monitor a cease-fire between warring factions. Emergency airlift of humanitarian relief for the people in Somalia began in July of 1992. By 28 August 1992 the United Nations mandated a troop deployment to provide security and protection of relief workers who were unable to deliver supplies within Somalia because of attacks by feuding warlords. On 3 December 1992 the Joint Chiefs of Staff issued a warning order to US Central Command for direct US intervention in Somalia. On 9 December 1992 US Marines landed in Mogadishu, Somalia. By 13 December Army elements of the JTF began arriving in Mogadishu.³⁴

The National Command Authority (NCA) assigned the UN mission to US Central Command. CENTCOM established a Joint Task Force (JTF). 1st Marine Expeditionary Force (MEF) served as the Marine Forces (MARFOR) and the 10th Mountain Division from Fort Drum, New York was designated as the Army Forces (ARFOR). The Marine

Corps Field Service Support Group (FSSG) provided initial logistics support.

During the planning phase it was determined that a JTF Support Command was needed to provide theater logistics support to US forces and limited support to coalition forces. Initially the support command was organized under the ARFOR, but prior to deployment it was placed under the command of the JTF. The JTF Support Command assumed the theater logistics mission from the Marine Corps on 28 January 1993.³⁵

The major elements of the JTF Support Command were the 7th Transportation Group, the 593rd Area Support Group, and the 62nd Medical Group. The 7th Transportation Group conducted port operations and was responsible for inland transportation of supplies. The 593rd provided direct support maintenance to non-divisional Army units and back-up direct support to Army and Marine divisional units. It also provided common supply support to coalition forces. The 62nd Medical Group was limited in size, but it had an air ambulance package because of the potentially long distances that would be encountered for casualty evacuation. It also had a large preventive medicine capability because of the high threat of disease in the theater.³⁶ The 13th COSCOM from Fort Hood was designated as the JTF Support Command.

The deployment and integration of these forces from various locations throughout CONUS was a time consuming task. This was not as efficient as deploying a trained and ready CSS command prepared for this mission. Also, a Joint Movement Control Center (JMCC) was not established during the initial deployment. The J4 of the JTF was not provided personnel and equipment to operate and run a JMCC. Consequently the J4 was unable to maintain visibility of forces arriving in the theater.³⁷

The JTF Support Command allowed the commander to support Joint forces in the theater. As noted earlier the integration of various units proved effective but was not very efficient. Also, the other services operating in the theater were generally self sufficient for the operation. It should also be stated that it took the JTF Support Command 50 days to deploy and begin operations in a relatively benign environment.

Operation Restore Hope was a small-scale contingency. The size of the force resulted in the establishment of a relatively small operational logistics force to meet the common support requirements of US forces in Somalia as well as providing limited support to other nations in the UN force. Although, the JTF Support Command met these requirements it would have had serious limitations in a more demanding environment. As a final note, the mission of the JTF Support Command was to provide common logistics support to the other services and coalition forces in Somalia. The Army could have provided this support without establishing a JTF Support Command. In addition, the JTF Support Command was purely an "Army" organization and by definition was not a joint support command. Joint doctrine also specifies that JTF logistical support should not be centralized because of the limited scope and duration of a JTF mission does not require the centralization of logistics. From this perspective, JTF Support Command in Somalia provides an interesting case study in the misunderstanding of joint logistics doctrine and/or the limitations of joint logistics doctrine.

Conclusions

The historical evidence of the past 50 years from World War II to the present indicates that joint logistics operations have been problematic. Competition for scarce

resources created problems in the Pacific between the Army and the Navy. In Vietnam, the inability to effectively establish common support agreements contributed to the duplication of effort and wasteful practices. The Persian Gulf War was the most significant contemporary example to illustrate the challenges of joint logistics. Host nation support, time, and geography in Saudi Arabia limited inter-service competition. Although the 22nd Support Command was responsible for common support to all services in the theater, the services also met many of their logistical needs from resources other than the Army. In Operation Support Hope a Joint Task Force Support Command was established to provide the common support to US forces. Although it was identified as a Joint Task Force Support Command it was essentially an Army Support Command responsible for providing common support. The establishment of a Joint Support Command to support a Joint Task Force also contradicted joint logistics doctrine. Despite the limited scope and magnitude of the operation, logisticians had a difficult time managing the flow of forces into the theater. More importantly, the operation pointed out that the learning curve of the JTF SUPCOM was exceptionally long and that it would probably would not have been able to support a much more demanding operation.

From World War II until the present the integration of logistical efforts to reduce duplication of effort within a theater has been a commonly accepted goal. Much of the burden to accomplish this integration falls on the shoulders of the unified commander. The unified commander can only organize those logistical forces assigned to him. These forces have been trained, organized and equipped to support forces from their respective service. Desert Storm proves that the services have lived up to this obligation. However,

they are not necessarily trained, organized, and equipped to support forces from other services. In Vietnam each of the services maintained and operated there own service peculiar logistics automation system – and they still do. Operations in Somalia indicate that the services are still not trained or equipped to deploy and execute joint logistical operations.

SERVICE FORCE STRUCTURE AND DOCTRINE

*Marine Corps war fighting philosophy must be supported by Marine-style logistics.*³⁸

Introduction

Doctrine provides the fundamental principles that military forces use to guide their actions. Doctrine also drives the organizational requirements needed to perform these tasks. The Army, Navy, Air Force and Marine Corps each have their own unique doctrinal and organizational requirements suited to their particular form of warfare. The doctrinal requirements of each of the services each have strong theoretical underpinnings. The theories of Clausewitz and Jomini profoundly influenced land warfare while Mahan and Douhet have equally influenced maritime and air warfare.³⁹ The logistical organizations and doctrine of each of the service are, not surprisingly, in harmony with the combat forces they support. This harmony allows the logistical forces to be responsive to the needs of the combat forces they support.⁴⁰

While each service tries to provide the best possible logistics support to its forces, the challenge of joint force commanders is to integrate these unique capabilities into an effective and efficient theater logistics force. This requires a basic understanding of the Army, Navy, Air Force, and Marine Corps logistical organizations and doctrine at the operational level.

The movement of supplies from the United States to combat forces for consumption illustrates the different logistical challenges of each service. Each node in the distribution system from the United States to the ultimate consumer has a capacity to receive, store, and issue supplies. The capacities of combat vehicles, ships, and aircraft at the end of the distribution system to store ammunition and fuel have a tremendous impact

on the design of a logistical system. For example, ammunition and fuel capacity of Army combat vehicles dictate that it must receive a daily resupply. On the other hand, Navy ships can support themselves extended periods of time with less frequent resupply needs. Finally, the range of modern aircraft allows the Air Force to operate from fixed bases and always return to the base after each mission to resupply.⁴¹ These simple differences have a tremendous impact on the design of the logistical forces of each of the services.

Army

The Army Theater Support Command (TSC) provides operational logistics support to Army forces in a theater of operations. It is a modular organization adaptable to various situations. One of its most critical functions is the initial establishment of theater air and seaports to support the projection of forces into a theater. The TSC has a theater-opening module (TOM) designed to provide the early communications systems and personnel to rapidly deploy and begin preparing a theater logistics structure. The organization is designed to accommodate cells from the Defense Logistics Agency (DLA), host nation support (HNS), contractors, and liaison cells from the other services as required. The organization establishes and commands Army theater logistical units that receive supplies, personnel and units moving into a theater. It also prepares them for further movement into the theater and provides sustainment for deployed forces and links the strategic logistical capabilities of the United States to the operational and tactical needs of the theater.⁴²

The Theater Support Command serves as the single Combat Support and Combat Service Support operator and provides command and control of personnel, finance,

medical, engineer, transportation, supply, and maintenance units that constitute the theater support base. A Distribution Management Center integrates both materiel management and movement control into a single activity to provide distribution management. The Theater Support Command provides the Army Service Component Command the ability to support Army forces (ARFOR) operating within a joint force.

The TSC is also structured to facilitate common logistics support to the other services. This is an important distinction because it is the only operational logistics organization explicitly designed to meet the logistical needs of the other services. Army doctrine for operational logistics also recognizes that the Army must be prepared to provide logistical support to other forces as directed by the CINC.

The Army has historically been the logistical workhorse in a theater of operations. The nature of warfare for the past century has generally made the Army the most dominant user of logistical support and the most capable service with regards to providing logistical support. It is of no surprise that the Army has tailored its logistical forces to meet not only its own demands but also those of the other services.

Navy

Naval logistics clearly illustrates how the logistical system of a particular service reflects the needs of its operational environment. Unlike ground forces, naval forces are capable of operating for extended periods of time before replenishment is needed. The Navy also conducts routine deployments in peacetime around the world. The transition to wartime operations is not as pronounced as it is for the Army. Unlike ground operations, naval operations are also relatively independent operations and are generally

not conducted in close proximity with the Army or the Air Force.

The direct link to the deployed fleet is the Combat Logistics Force (CLF). The CLF replenishes forward deployed or underway combatant vessels. At sea replenishment encompasses the coordinated movement of passengers, mail, supplies, and bulk liquids to deployed forces as large as a battle group down to individual ships and submarines conducting independent operations. The CLF includes ammunition ships, fleet oilers, combat stores ships, and salvage ships. These units are under the operational control of a theater logistics task force commander.⁴³

The Navy also establishes forward bases known as Advanced Logistics Support Sites and Forward Logistics Sites to serve as the primary transshipment points for materiel and personnel destined for deployed units within a theater of operations. An ALSS is established at a secure location readily accessible to seaport and airfield facilities but not in close proximity to main operating or combat areas. These sites possess full capability for receiving, storing, and forwarding supplies and personnel to deployed units operating in the area. A forward logistics site (FLS) is the last transshipment point that provides the bridge between the ALSS and customers at sea or in forward positions on the ground. The FLS may be established at a site located near a port and airfield, but in close proximity to the main battle area.⁴⁴ During Desert Storm the Navy established a Naval Operational Logistics Command (NOLC) to coordinate operational logistics requirements of naval forces in a theater.

Marine Corps

The Marine Corps assembles Marine Air Ground Task Forces (MAGTF) to

accomplish assigned missions. Each MAGTF consists of a command element, a ground combat element, an aviation combat element and a combat service support element. The combat service support element is also referred to as the field service support group (FSSG) and it provides the logistical support to the MAGTF. There are 3 types of MAGTF: the Marine expeditionary force (MEF); The Marine expeditionary unit (MEU); and a special purpose MAGTF (SPMAGTF). The MEF and the MEU each carry 60 and 15 days of supply respectively.⁴⁵

The field service support group (FSSG) is the largest logistics support organization of the MAGTF. It provides tactical level ground logistics support to all elements of the MEF. The FSSG can also provide operational logistics support to the Marine component of a joint force. During Operation Desert Storm two force service support groups with almost 14,000 Marines and Sailors were employed to support 92,000 Marines. The 1st Field Service Support Group was organized along functional lines and provided general support to the entire Marine expeditionary force. It was responsible for receipt of supplies at ports and their subsequent delivery to forward units. The 2nd Field Service Support Group provided direct support to combat forces.⁴⁶ As a result of lessons learned in Desert Storm, The Marine Corps has developed a concept for a Marine Logistics Command (MLC) to provide operational level logistics support as was done by the 2nd FSSG. It will facilitate reception, staging, onward movement, and integration operations.⁴⁷

It should be noted that Marine Corps Doctrinal Publication 4.0 describes the theory and practice of Marine Corps logistics. The publication acknowledges the Marine

Corps' responsibility to provide logistics support to its own forces. Although not specifically mentioned, the Marine Corps depends on the Army for inland distribution of supplies when Marine forces operate at extended distances inland from the shore.

Air Force

The basic fighting unit of the Air Force is the squadron. Squadrons are not designed to conduct independent operations. Fighter, bomber, airlift, information, logistics, and medical squadrons are combined into deployable groups or wings to conduct expeditionary operations.⁴⁸ The Air Force, like the other services, is developing logistics doctrine based upon the promises of advanced information and transportation technologies.⁴⁹ This doctrine envisions an agile combat support structure that can deploy rapidly, provide responsive support, and reduce the number of deployed logistics units and personnel needed to accomplish the mission.

The Air Force is also responsible for the support of its own forces assigned to a CINC. At the operational level, the Air Force Contingency Supply Squadron (AFCSS) provides logistical support to Air Force units assigned to a war fighting CINC during wartime, contingency, natural disaster or humanitarian relief operations. The AFCSS operates a Standard Base Supply System (SBSS) to provide the same functions and support that a home station base supply does.⁵⁰ The use of an AFCSS is determined by the air bases located in the theater. A deploying unit may be able to deploy and receive support from an existing base. When an existing base with sufficient capability is not available, the AFCSS can deploy and provide the necessary support in a bare base

environment.⁵¹

The Air Force logistics system is designed to meet its operational war fighting requirements. Unlike the other services, the Air Force operates from a fixed base. Its combat forces (aircraft) return to the base after completion of their assigned missions. This freedom of action allows the Air Force to focus on their base operations to ensure maximum support to combat operations.

Doctrine

Each of the services has developed a body of logistics doctrine to support the military operations of their respective forces. Generally, logistics doctrine for each of the services is remarkably similar. First, each service recognizes that there are 3 tiers of logistics corresponding to the levels of war- strategic, operational, and tactical. At the operational level, the Army divides logistics into 6 functional areas of supply, transportation, maintenance, personnel support, combat health support, and field services. The Navy and Marine Corps divide logistics into supply, maintenance, transportation, engineering, health services, and other services. The Air Force includes contracting, maintenance, supply, transportation, and planning. Finally, each of the services supports the joint principles of logistics stated in Joint Publication 4.0: responsiveness, simplicity, flexibility, economy, attainability, sustainability, and survivability.

The differences in the logistical doctrine of each of the services become apparent only when the various doctrinal manuals begin to describe the characteristics of their logistics systems. For instance, the naval logistical system consists of CONUS bases, advanced support bases and its Combat Logistics Force which provides underway

replenishment to ensure naval combat forces can remain at sea for extended and uninterrupted periods of time.⁵² Marine Corps logistics doctrine is essentially naval in character. It relies on its logistics support "from the sea" and is designed to operate in austere environments on land and at sea, or in the littoral region where the two meet. Marine Corps doctrine also recognizes that it must be flexible to draw on other theater support to sustain extended operations on shore.⁵³

Army logistics doctrine for a theater of operations is very specific. It describes the theater structure of bases, lines of communication, and command and control requirements in great detail. Unlike the other services, Army doctrine is also very specific about its theater logistics responsibilities to the Army and the other services as part of a joint team. The Air Force's primary document for logistics doctrine does not describe its theater logistics system in any detail. The Air Force logistics system is also highly dependent upon Army logistics to ensure that fuel, water, food, and ammunition are moved from sea ports of debarkation to air bases operating in a theater.

Summary

Each of the services brings significant and complementary capabilities to the theater of operations. The logistical capabilities of each service are in harmony with their respective combat forces. Historically, the Army has had the greatest responsibility of providing logistics support to the other services. These service capabilities provide the CINC tremendous flexibility. While he is required to minimize duplication of effort between the services, there are some circumstances where redundancy is desirable. His challenge is to integrate these forces into an effective and efficient theater logistics

system. How the CINC integrates these forces into an effective and efficient logistics force is the subject of the next section.

JOINT LOGISTICS DOCTRINE

To meet our Nation's global responsibilities, our ability to move and sustain combat forces virtually anywhere must be maintained. This requires efficiently integrating the unique capabilities of our Services.

General Shalikashvili, Former Chairman, Joint Chiefs of Staff⁵⁴

Introduction

Current joint logistical doctrine is based upon law. Title 10 of the United States Code requires each service to provide logistical support to the forces it assigns to a joint command. The unified or subordinate unified commander also has directive authority for logistics that allows him to review requirements, establish priorities, allocate critical resources, and reduce unnecessary duplication of effort.

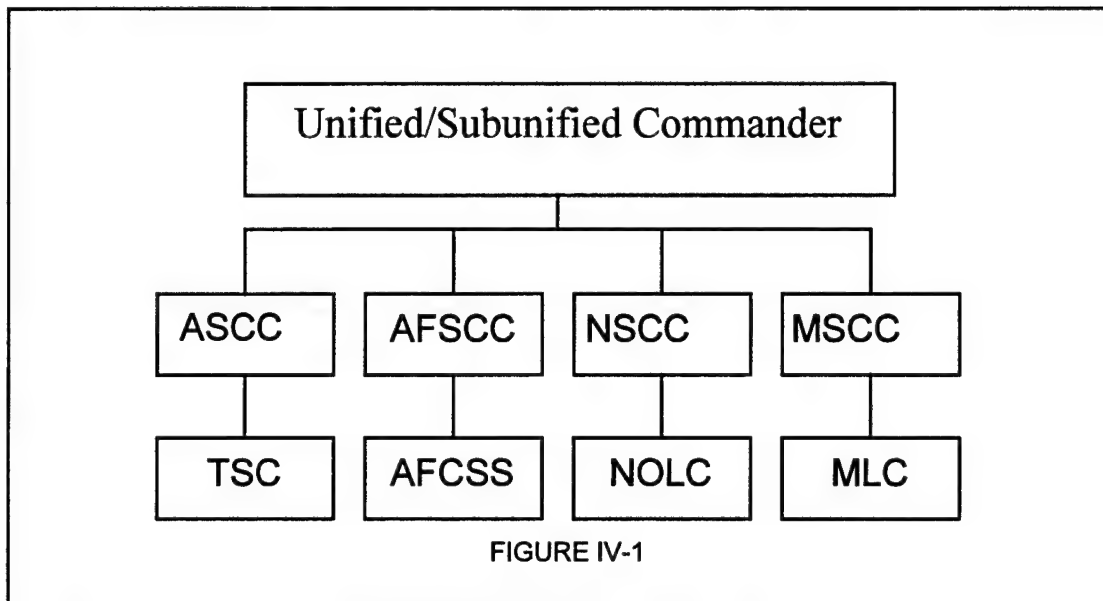
Directive authority for logistics provides a unified or subordinate unified commander broad authority for organizing his theater logistical forces using three basic options. The first option simply requires assigned forces to be supported by their parent service. A second option allows the commander to utilize common, joint or cross-servicing to reduce duplication of effort among the services. Under these arrangements one service provides support to another service. Common servicing requires no reimbursement for support provided, cross-servicing requires reimbursement from the service receiving the support, and finally joint servicing charges the costs of reimbursement to the overall joint force. Designation of the lead agent to support another service is normally based upon the service with the greatest capability to provide the service (most capable service) or the service that consumes the most of a particular supply or service (dominant user). Finally, the commander can authorize a Joint

Logistics Command created from the elements of each of the services to provide logistics to the theater.⁵⁵

As the commander organizes his theater logistics structure he must also consider existing wartime executive agent responsibilities (WEAR) of each service that have been assigned to each of the services by the Department of Defense. For example the Army provides inland petroleum distribution to all services in a theater. Appendix A lists the wartime executive agent responsibilities that have been assigned to the Army by the Department of Defense.⁵⁶ It should be noted that although Appendix A provides a list of commonly accepted executive agency responsibilities of the Army, there is no definitive source of executive agency responsibilities outlined in joint doctrine. The lack of such a definitive source complicates and confuses discussions of the executive agency responsibilities assigned to each service. Finally, commanders must ensure that staff supervision is provided to ensure that logistics plans are properly executed to support operational requirements. The commander's Logistics Staff Officer (J4) is responsible to coordinate logistical requirements of a joint force.

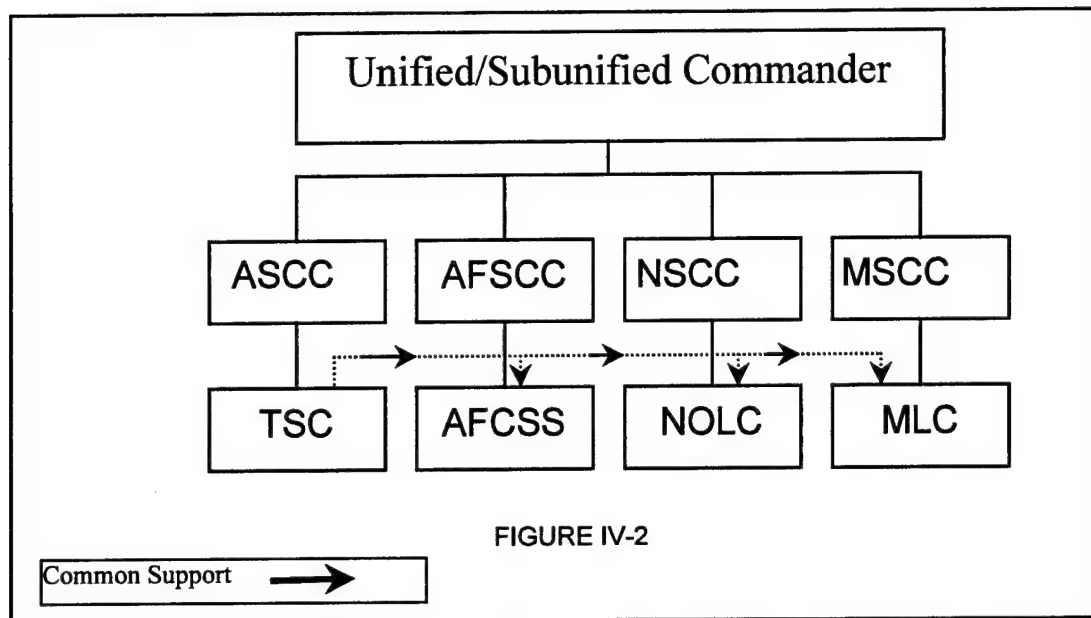
Title 10 Support by Each Service

Figure IV-1 illustrates the support option where each service provides logistical support using their service component commanders in accordance with their Title 10 departmental responsibilities. This option maximizes the logistical capabilities each service and provides commanders and their planners great flexibility. This option facilitates decentralized operations but also causes the greatest duplication of effort.



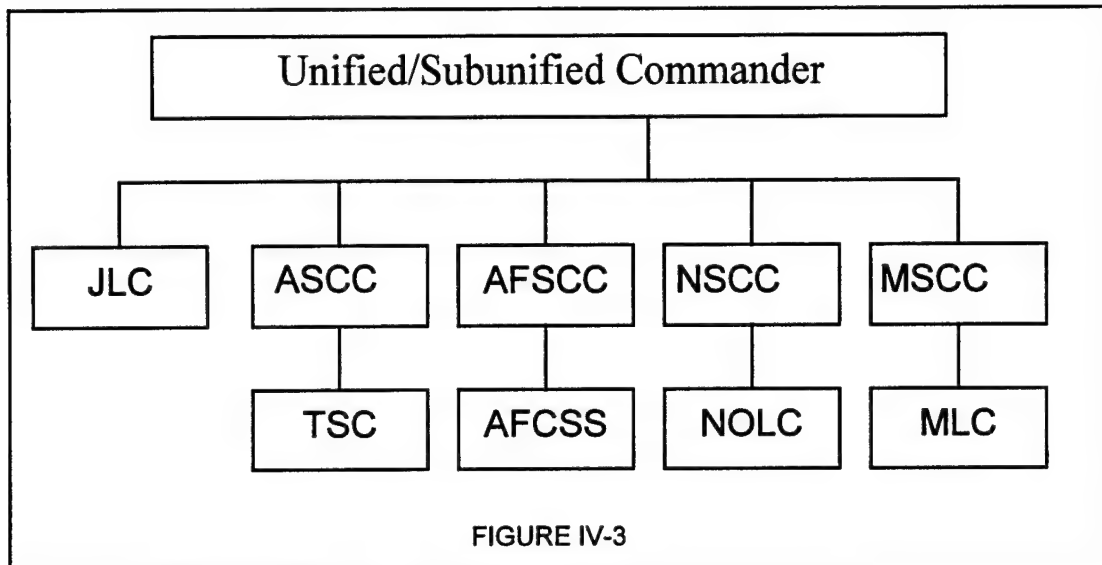
Designation of a Lead Agent for Common User Support

Although the previous option provides a great amount of flexibility, commanders are also responsible to reduce or eliminate duplication of effort. Duplication of effort increases the size of the logistics force that must be deployed to support the theater. This can create competition between the services in a theater, increases the overall logistics requirements for the force, and increases the security requirements of theater logistical base. To combat these conditions, the commander may designate a lead agent for common user logistics to address this situation. Figure IV-2 depicts the Army Service Component Commander providing support to the other services. Although the Army is normally the lead service for common support, the CINC could also direct the Air Force, Navy, or Marine Service Component Commander to provide common support to another service.



Joint Logistics Command

Unified and subordinate unified commanders also have the authority to establish a Joint Logistics Command to coordinate all logistics matters in the theater. It would have elements from each of the services. The intended advantage of this approach is to have a single theater joint headquarters to provide logistical support. Current joint doctrine allows the unified and subordinate unified commander to form a joint logistics command. During Operations Uphold Democracy and Provide Hope, the 1st COSCOM and the 13th COSCOM were designated as a Joint Logistics Commands. These commands were not composite commands from each of the services and therefore they did not strictly meet the criteria of a joint command.



Inter-Service Coordination

As previously stated the unified and subordinate unified commander is responsible to ensure that his joint forces are supported. He is also responsible to ensure that the support structure avoids duplication of effort. Finally, he is responsible to prioritize and allocate scarce resources between the services. The theater logistics includes supply, maintenance, transportation, general engineering, health services, and other services (to include field services). Historically, transportation has been the most contentious resource at the operational level. To facilitate the allocation and prioritization of resources the combatant commander utilizes his J4, staff logistician, and a myriad of boards. A list of potential boards, committees, and offices to coordinate inter service logistics requirements are listed below:

Joint Transportation Board
Joint Facilities Utilization Board
Joint Medical Regulating Office
Joint Movement Center
Joint Civil Military Engineering Board
Joint Petroleum Office

Joint Mortuary Affairs Office
Joint Military Blood Office
Joint Theater Contracting Office
Joint Materiel Priorities and Allocation Board
CINC Logistics Procurement Support Board

Summary

Logistics at the operational level is a critical to the joint commander's operation. Each of the services brings significant capabilities to the theater. During the initial phases of either a developed OPLAN or during a crisis action planning scenario, deployment, employment, and sustainment of arriving forces is a complex task. Joint doctrine empowers a unified or subunified commander to organize forces to meet various situations. The J4 coordinates the logistical support requirements needed to support operations. The J4 also exercises staff supervision over logistics boards, centers, and offices to ensure that the logistical efforts of the services are coordinated. Besides the Title X capabilities of each service to support its own operations, the J4 will also review Wartime Executive Agent Responsibilities to identify the service responsible of specific wartime logistics support.

ANALYSIS

Introduction

Is a Joint Logistics Command needed to provide a commander the means to conduct effective and efficient joint logistics operations? Doctrine, organizations, training, materiel, leadership and people (DOTMLP) will be analyzed to answer this question. The DOTMLP provides a systems approach to designing and developing force structure. For example, if the military introduces new materiel because of technological advances, it must ensure that its people, organizations, and leaders have been prepared to accommodate the changes of new materiel. In addition, new doctrinal approaches for warfighting will impact on organizations, training, materiel, leaders, and people.

Doctrine

Joint doctrine provides three ways to organize forces to support joint logistical operations. Each service can support its own forces, a lead service can be designated to provide common support, and finally a Joint Logistics Command can be established. Each of the services designs logistical forces to meet its unique logistical needs. Each service can also be tasked to support another service. The Army in particular is organized to meet the needs of the other services. Although each service recognizes the requirement to provide common support to another service, no service doctrine recognizes the requirement to merge service capabilities into a Joint Logistics Command. Although this is a prerogative of the unified commander, it begins to encroach on the statutory responsibilities of the services unless it is done on a temporary basis.

Joint logistics doctrine developed since the Goldwater-Nichols Act is having a positive

impact on joint logistical operations. Service logistical doctrine is becoming more compatible with joint doctrine. ACOM, SOUTHCOM, CENTCOM, and PACOM, and EUCOM fully understand the issues and challenges of joint logistics. Each of the service components within these unified commands also fully understands their logistical responsibilities. Joint logistics doctrine is providing a common framework for planning and executing joint logistical operations.⁵⁷ These developments will lessen many of the problems associated with joint logistical operations of the past.

Organization

The logistical forces of the services are closely tied to their doctrinal foundations. Each service has developed logistical forces that are in harmony with their respective warfighting needs. The Army has designed logistical forces to meet its own needs as well as the needs of the other services for common logistics support. The Army is also responsible for a significant number of wartime executive agent responsibilities (WEAR). The Army also recognizes its inherent responsibilities to support other services because it has historically been the major logistics provider of a theater commander. The Army's Theater Support Command is specifically designed to provide common support to the other services. Utilization of the TSC to provide common support will eliminate unnecessary duplication of effort inherent in joint logistical operations. Army doctrinal manuals embrace the concept of common support and provide a joint force commander tremendous capability.

Currently there are no standing operational joint logistics forces. A Joint Support Command can only be established upon the directive of a unified commander. This

would is normally done to meet a temporary requirement e.g., Joint Support Command Somalia. Establishing a permanent Joint Support Command at the operational level would probably contradict the intent of Title 10 and challenge the authority of the services. The J4 of a joint staff is the only standing entity that exists to coordinate joint logistics issues. The risk of establishing a Joint Support Command on short notice is that it will not be trained, organized, equipped, and manned to perform its assigned mission. Even if a Joint Support Command is established, its primary purpose would be to provide common logistics support. Unique service requirements would still be provided through service channels.

The concept of a Joint Logistics Command also suffers from other drawbacks. First, during a period of reduced budgets it will be very difficult to establish a Joint Logistics Command for each unified commander. Second, the Army already has 5 theater support commands to meet Army logistical requirements as well as common support requirements. Finally, force structure in today's environment is generally a zero sum game. Creation of joint logistics forces will most likely come at the expense of the services. In a quest to establish more centralized and efficient logistical forces, the overall effectiveness of logistical support to the services may suffer.

Training

The lack joint training programs is exacerbated by the fact that theater level logistics is probably weak across the services. For example, a Rand Study commissioned by CASCOT assessed the training of Army Combat Service Support (CSS) units above the division level. The study found that theater level CSS units do not have the Combat

Training Centers (CTC) such as the National Training Center to conduct annual realistic training. Furthermore, most exercises are too narrowly focused because of legitimate exercise constraints. For example, reception, staging, onward movement and integration (RSOI) exercise is frequently assumed away in order focus on the combat operations phase of an exercise. Finally, simulations for exercises are focused on operations rather than logistics.⁵⁸ The Rand study was also used to develop methods to train Army echelons above division logistical forces to improve its operational logistics capabilities. The Army is also conducting exercises to test and improve its Theater Support Command.

Materiel

Each service has designed a logistical system compatible with their respective service. Interoperability standards have helped reduce the problems associated with simple tasks such as dispensing fuel from an air force system to an army system. On the other hand, the services have not developed logistical organizations and materiel to support their sister services.

The most notable materiel problem concerns automated logistical systems. Each service has their own specific automated logistical system to meet their own peculiar needs. During the Persian Gulf War, no service had the ability to track their supplies in the logistics pipeline. This shortcoming was inefficient and much has already been written about the problem. This shortcoming has also prompted a Department of Defense wide effort to improve the ability to track supplies from CONUS through the logistics pipeline and to the ultimate consumer. Information technology promises to dramatically improve

the ability of all services to track their supplies.

Materiel improvements in logistical systems extend beyond information systems. The more important point with regard to this monograph is that improved information systems are a necessary condition for major improvements in the ability to conduct effective and efficient joint logistical operations. Neither the Theater Support Command nor a Joint Support Command will dramatically improve the efficiency and effectiveness of joint logistical operations without significant advances in logistical information systems.

Leader Development and People

Leader and people development along with their associated training are naturally focused on developing the logistical skills of their parent service. Training and education that occurs at the Armed Forces Staff College focuses on joint operational planning and warfighting. The Joint Training, Analysis, and Simulation Center prepares a JTF Commander and Staff to conduct joint operations. There are no training programs that specifically target logisticians to develop skills needed to plan and execute joint logistical operations. The introduction of new logistical information systems will demand better training of people from of all the services to fully utilize the potential of these systems.

SUMMARY

We need effective joint logistical operations - not a joint logistical command.
Anonymous

Research Summary

From an historical perspective the record of joint logistics for the past 50 years suggests that a Joint Logistics Command is needed to ensure effective and efficient joint logistical operations. Advocates argue that historically, joint logistics operations were far from efficient. Centralization of logistics functions into a joint logistics command could possibly reduce the duplication of effort that currently exists between the services. A Joint Logistics Command would also provide the joint commander more control over his logistical forces. This control would in turn contribute to unity of command and effort.

The historical evidence also suggests that logistical operations from World War II to the present have been very effective. The logistical capabilities and accomplishments of American military forces have been extraordinary. These capabilities provided commanders with very versatile forces capable of meeting a wide spectrum of challenges from humanitarian operations to high intensity conflict. Redundancy between the services permitted commanders to conduct decentralized air, ground, and naval operations. Any consolidation of logistical forces of the services into a Joint Logistics Command must not only look at the anticipated efficiencies, but also the possibility that consolidation could also be less effective.

Joint logistics doctrine provides commanders three courses of action to support joint logistical operations. These options range from a very decentralized concept where each service is responsible for its own support requirements to a very centralized concept

where the logistical organizations of the services are integrated into a single Joint Logistics Command. Between these two extremes lies a more moderate option where a lead service is designated to provide common support to the other services. These options allow a commander the flexibility to tailor his logistical forces to the particular situation. The degree of integration required to support operations like Desert Storm will vary from a humanitarian operations like Operation Restore Hope in Somalia.

The 1986 Goldwater Nichols Act also established a requirement for the services to develop joint doctrine. It is difficult to assess the impact that this legislation had on joint logistical operations in Desert Storm. However, recent developments in joint logistics doctrine promise to improve joint logistics operations in the future. Joint logistics doctrine has more clearly defined the tasks and responsibilities of each service with regards to joint operations. Current joint doctrine also recognizes the inherent differences between air, ground, and naval warfare. Recognition of these differences allows joint doctrine to leverage service peculiar logistical systems in a complimentary fashion to design an effective and efficient joint logistics system. Commanders have maximum flexibility to tailor logistical forces to the situation at hand.

In the past none of the services have traditionally been fully organized, equipped and trained during peacetime to conduct joint logistical operations. Each of the services has designed logistical forces to meet its particular needs. None of the services have designed logistical forces to be part of a Joint Logistics Command. On a more positive note, the Army has developed the Theater Support Command (TSC) to support Army operations and to provide common support to the joint force commander. More

importantly, the TSC is organized, equipped and trained for this mission.

Analysis of doctrine, organizations, training, materiel, leaders, and people (DOTMLP) also led to the conclusion that a Joint Logistics Command was unnecessary. As stated above, joint doctrine already provides commanders maximum flexibility to tailor logistical forces to meet situational requirements. Army doctrine also recognizes that it will most likely be the lead service to provide common support under most circumstances.

The Army also modified its organizational structure by developing a TSC to meet common support requirements for the other services. A Joint Logistics Command would provide the same support as a TSC. In today's cost conscious environment it seems unnecessary to create a joint organization to perform a mission that one of the services is already organized to perform. Finally a Joint Support Command would most likely result in a reduction of the logistical forces of each service while also infringing upon the statutory responsibilities of each service to raise, train, equip and support its own forces.

In the past, none of the services were able to maintain visibility of assets in their logistical pipeline. Establishing a Joint Logistics Command will not solve this basic problem. Recent materiel developments, particularly in the area automated logistics systems, will provide this capability. Joint Vision 2010, Focused Logistics provides a roadmap to the future of logistics that will harness advanced information technology to improve asset visibility across all of the services. This will provide joint force commanders and their staffs the ability to more effectively and efficiently manage joint logistics operations. It will provide the essential information needed to establish

priorities, allocate scarce resources, and eliminate unnecessary duplication of effort without creating a Joint Logistics Command.

Leader development, people, and their associated training will always be vital to the success of joint logistics operations. Generally, each of the services has developed logisticians focused on the needs of their parent service. Programs are needed to develop the skills needed to operate advanced information systems in a joint environment.

Recommendations

Based upon the evidence presented in this monograph, a Joint Logistics Command is not needed to ensure effective and efficient support of joint operations. Joint doctrine provides the unified or subordinate unified commander ample flexibility to integrate the logistical capabilities of the services. Currently, joint doctrine also allows commanders to form a Joint Logistics Command to support joint operations. The services do not have organizations that are manned, equipped or trained to become a Joint Logistics Command. More importantly, a Joint Logistics Command is unnecessary. The same benefits of utilizing a Joint Logistics Command can be obtained by designating a lead service for common logistics support. Although the choice of lead service is based upon the actual situation, the Army TSC is the most capable organization to provide common logistics support for most circumstances. Joint doctrine should continue to clarify the tasks and responsibilities of each service regarding joint logistics. Specifically, joint doctrine should identify the wartime executive agency responsibilities of each service in a single source document. Joint initiatives in the area of logistics automation need to improve the ability of joint commanders to set priorities, allocate

critical resources, and reduce duplication of effort without undermining the logistical capabilities of the services. The aggressive pursuit of these recommendations will ensure that future joint logistics operations will be both efficient and effective.

Appendix A (Wartime Executive Agent Responsibilities)

| Function | Tasking Document |
|---|--------------------------------|
| Inland Logistics Support to USMC | 1947 Key West Accord |
| Casualty Evacuation to USN Hospital Ships | Defense Medical Planning Guide |
| Mortuary Affairs | DSD Memorandum |
| Troop Construction Support (OCONUS USAF) | DODD 1315.6 |
| Overland Petroleum Support | DODD 4140.25 |
| Container Management for all Services | DODD 4500.37 |
| Water Support for all Services | DODD 4705.1 |
| DOD Military Customs Inspection Program | DODD 5030.49R |
| EPW Detainee Program | DODD 5100.69 |
| Operation of Common Ocean Terminals | DODD 5160.53 |
| Locomotive Management | DODD 4140.50 |
| Conventional and Chemical Ammunition | N/A |
| Common user ground transportation | N/A |
| OCONUS Port Management | N/A |
| Inter modal Container Movement | N/A |
| Finance and Currency Support | N/A |
| Chemical Ammunition | N/A |
| Class I Distribution | N/A |
| Land Based Water Resources | N/A |
| Blood Support | N/A |
| Highway Transportation Engineering | N/A |
| Explosive Ordnance Disposal | N/A |
| Airdrop Equipment and Systems | N/A |

ENDNOTES

¹ Ulysses S. Grant, *Memoirs and Selected Letters* (New York: Literary Classics of the United States Inc., 1990), 385-386.

² *Ibid.*, 305-306.

³ James A. Huston, *The Sinews of War, Army Logistics from 1775-1953*, The Army Historical Series, vol. 2 (Washington: Center of Military History, United States Army, 1988), 284.

⁴ *Ibid.*, 547.

⁵ Charles R. Shrader, *United States Army Logistics 1775-1992, An Anthology*, vol. 3 (Washington: Center for Military History, Department of the Army, 1997), 655-656.

⁶ Joint Publication 0.2, *Unified Action Armed Forces*, 24 February 1995, IV-9.

⁷ Joint Publication 4.0, *Doctrine for Support of Operations*, 27 January 1995, vi.

⁸ Joint Publication 5.0, *Doctrine for Planning Joint Operations*, 13 April 1995, xii.

⁹ *Ibid.*, iv-1.

¹⁰ Joint Vision 2010, *Focused Logistics: A Joint Logistics Roadmap*, September 1997, Foreword.

¹¹ Charles R. Shrader, *United States Army Logistics 1775-1992, An Anthology*, vol. 3 (Washington: Center for Military History, Department of the Army, 1997): 537-538 citing the testimony of General of the Army Dwight D. Eisenhower before the US Senate in 1945.

¹² C. Kenneth Allard, *Command, Control, and the Common Defense* (New Haven: Yale University Press, 1990), 98.

¹³ *Ibid.*, 104.

¹⁴ Huston, *The Sinews of War, Army Logistics from 1775-1953*, 538.

¹⁵ Kenneth Macksey, *For Want of a Nail, The Impact on War of Logistics and Communications* (London, Brassey's (UK) Ltd., 1989), 122.

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- ¹⁶ Huston, *The Sinews of War, Army Logistics from 1775-1953*, 542.
- ¹⁷ John D. Millett, *The Organization and Role of the Army Service Forces*, The United States Army in World War II (Washington: Center of Military History, United States Army, 1985), 60-74.
- ¹⁸ Huston, *The Sinews of War, Army Logistics from 1775-1953*, 544.
- ¹⁹ Macksey, *For Want of a Nail, The Impact on War of Logistics and Communications*, 138.
- ²⁰ Huston, *The Sinews of War, Army Logistics from 1775-1953*, 545.
- ²¹ Huston, *The Sinews of War, Army Logistics from 1775-1953*, 540.
- ²² Joseph M. Heiser, Jr., *Logistics Support*, Vietnam Studies (Washington: Department of the Army, 1974), 14.
- ²³ Julian Thompson, *The Lifeblood of War, Logistics in Armed Conflict* (London: Brassey's (UK) Ltd., 1991), 193.
- ²⁴ Joseph M. Heiser, Jr., *Logistics Support*, Vietnam Studies (Washington, D.C.: Department of the Army, 1974), 8-10.
- ²⁵ Joseph M. Heiser, Jr., *A Soldier Supporting Soldiers* (Washington: Center for Military History, United States Army, 1991), 148.
- ²⁶ *Ibid.*, 153-154.
- ²⁷ *Ibid.*, 150.
- ²⁸ *Ibid.*, 160.
- ²⁹ *Ibid.*, 158.
- ³⁰ William G. Pagonis with Jeffrey L. Cruikshank, *Moving Mountains*, (Boston: Harvard Business School Press, 1992), 97-98.
- ³¹ *Ibid.*, 1-6.
- ³² *Brute Force Logistics*, United States Air Force Logistics Journal, Chapter 3.
- ³³ Benjamin King, Richard C. Biggs, and Eric R. Criner, *Spearhead of Logistics, a History of the United States Transportation Corps*, (Fort Eustis, Virginia, 1994), 432.
- ³⁴ *Operation Restore Hope*, Lessons Learned Report, Center for Army Lessons Learned, US Army Combined Arms Command, Fort Leavenworth, KS, November 1993, 1-3.

³⁵ *ARFOR After Action Report for Operation Restore Hope*, Headquarters Department of the Army, 10th Mountain Division, 69.

³⁶ *Ibid.*, 68.

³⁷ *Operation Restore Hope, Lessons Learned Report*, Center for Army Lessons Learned, US Army Combined Arms Command, Fort Leavenworth, KS, November 1993, v-10.

³⁸ Marine Corps Doctrinal Publication 4, *Logistics*, (Washington: Department of the Navy, 1997), 88.

³⁹ Allard, *Command, Control, and the Common Defense*, 11.

⁴⁰ Henry E. Eccles, *Logistics in the National Defense*, 2nd ed. (Westport, Connecticut: Greenwood Press Publishers, 1981), 224-225.

⁴¹ Eccles, *Logistics in the National Defense*, 143.

⁴² LTC Ron Cussins, *The Case for a Theater Support Command*, Army Logistician, (July/August 1997).

⁴³ Joint Pub 4-07, *Joint Tactics, Techniques and Procedures for Common User Logistics*, August 1998, C-1.

⁴⁴ *Ibid.*, C-1,2.

⁴⁵ *Ibid.*, D-3.

⁴⁶ Marine Corps Doctrinal Publication 4, *Logistics*, (Washington: Department of the Navy, 1997), 112.

⁴⁷ *Ibid.*, 123.

⁴⁸ *Air Force Doctrine Document 1*, Department of the Air Force, September 1997, 71.

⁴⁹ *Ibid.*, 34-35.

⁵⁰ Joint Pub 4-07, *Joint Tactics, Techniques and Procedures for Common User Logistics*, August 1998, D-1.

⁵¹ *Ibid.*, E-1.

⁵² Naval Doctrinal Publication 4, *Naval Logistics*, (Washington, Department of the Navy), 67.

⁵³ Marine Corps Doctrinal Publication 4, *Logistics*, (Washington: Department of the Navy, 1997), 90.

⁵⁴ Joint Publication 4.0, *Doctrine for Support of Operations*, 27 January 1995.

⁵⁵ Joint Publication 4.07, *JTTP for Common User Logistics During Joint Operations*, First Draft 3 August 1998, III-1 and III-2.

⁵⁶ FM 101-10-1, *Theater Combat Service Support*, (Washington: Headquarters Department of the Army, 1988).

⁵⁷ Staff visits were made by the author to each of the geographic unified commands during the preparation of this monograph. It was clear from briefings and discussion with representatives of the commands that they understood joint doctrine and the challenges of conducting joint logistics operations.

⁵⁸ Rand Study, *Microworld Simulations for Command and Control Training of Theater Logistics and Support Staffs: A Curriculum Strategy*, John R. Bondanella and others, October 1997, Rand Arroyo Center, XVII

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